L 55150-65
ACCESSION NR: AP5011237

These, in turn, differ from the effects produced by internal administration of radioactive substances, for some of the latter tend to concentrate in growing bones and impair normal development. The skeleton is most affected by whole-body irradiation and ensuing radiation sickness. The pathogenesis of impaired osteogenesis is much more complex than after local irradiation. Besides the direct effects on bony tissue, irradiation also has indirect injurious effects resulting from damage to some other systems of the body. The experimental data to date indicate that the skeleton plays a major role in the development of radiation injury in the growing organism. The condition of the bony system often predetermines the viability of the organism after exposure.

ASSOCIATION: Kafedra meditsinskoy radiologii Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey im. S. M. Kirova (Department of Medical Radiology, Leningrad "Order of Lenin" Institute of Postgraduate Medicine)

SUBMITTED: 00 ENCL: 00 SUB CODE: LS

NO REF SOV: 015 OTHER: 027

Card 2/2

KHOLI A, A. N.

SAFRONOVA, N. I. and KHOLI A, A. N. "An Attempt to Fix the Rate of Admissible Norms of Wheat Seed Infection with Fusarium avenaceum Sacc.," Itogi Nauchno-Issledovatel' skikh Rabot Vsesoluznogo Instituta Zaschity Rastenii za 1935 Goda, 1936, pp. 176-177. 423.92 I54I

Sira-Si-90-53, 15 Dec. 1953.

KHOLINA, L.M.

ZAKHARKIN, L.I.; KHOLINA, I.M.

Production of aldehydes by reduction of nitriles with diisobutylaluminum hydride. Dokl. AN SSSR 116 no.3:422-424 S '57. (MIRA 11:2)

1.Institut elementoorganicheskikh soyedineniy AN SSSR. Predstavleno akademikom A.N. Nesmeyanovym.
(Aldehydes) (Nitriles) (Reduction, Chemical)

AUERMAN, L.Ya.; RAKHMANKULOVA, R.G.; BAZULINA, E.F.; TYURINA, G.V.; KHOLINA, L.S.

Determining the degree of staleness of wheat bread by the compressibility and crumbling capacity of the soft part of the bread. Trudy MTIPP 4:121-126 '56. (MLRA 9:10)

(Bread)

INKER, Mishel' [Hincker, Michel]; NOVIKOV, R.A.[translator]; KHOLINA, N.I.[translator]; POKROVSKIY, A.I., red.; KISELEVA, V.I., red.; KHOMYAKO, A.D., tekhn. red.

[New aspects of financial oligarchy in France] Novye cherty finansovoi oligarkhii vo Frantsii. Obshchaia red. i predisl. A.I.Pokrovskogo. Moskva, Izd-vo inostr. lit-ry, 1960. 137 p. (MIRA 15:3)
Translated from the French.
(France--Economic conditions)

MARUSOVA, I.V.; KHOLINA, N.M.

Biology of the flycatcher Muscicapa albicollis Temm in western provinces of the Ukraine. Nauk. zap. UzhGU 40:75-81 '59.
(MIRA 14:4)

1. Kremenetskiy pedagogicheskiy institut.
(Ukraine--Flycatchers)

S/169/62/000/011/015/077
D228/D307

AUTHORS: Momdzhi, G.S., Kholina, V.I. and Abulevich, V.K.

TITLE: Results of testing the radiometric device "Tsirkon" and the method of its application

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1962, 60, abstract 11A358 (Razvedka i okhrana nedr, no. 5, 1962, 17-23)

TEXT: The determination of the zircon content of placer samples is possible by a radiometric method. The radioactivity of zircon is caused by the presence in it of isomorphous uranium-thorium admixtures, the amount of which depends on the conditions of the formation of zircon. For coeval sandy beds in one area the average zircon radioactivity value varies in a narrow range. The zircon content of samples is determined by comparing the radioactivity of the zircon concentrate, extracted from the nonmagnetic part of a sample's heavy fraction, with that of a sample of its monomineralic fraction representing the standard. The radioactivity of concen-

Card 1/3

Results of testing ...

trates can be determined with a scintillation β-counter. A special "Tsirkon" device was created for β-measurements of such weak sources as zircon concentrates and products containing small quantities of monazite. The accuracy of the determination grows if the measurement time is increased. The divergence of the results of radiometric and mineralogic determinations of the zircon concentration in samples constitutes 0.3-186% [Abstracter's note: Decimal point omitted]. To increase the precision, magnetic radioactive mineral grains should not be allowed to get into the sample under investigation. The concentration of zircon and monazite in the standard should not be less than 70% and 20% respectively; the standard concentrate has, therefore, to be enriched further. It was established that the dependence of the measurement results on the value of the weighed portion being measured is close to linear in the interval of the most often used weighed portions (30-200 mg). The "Tsirkon" device is suitable, provided the geometry of the standard and the sample under study is the same and the standard is, without fail, chosen from the same stratigraphic beds as the sample being measured. In their precision, correctly made measurements of the

Results of testing ...

zircon content are not inferior to mineralogic determinations. Radiometric monazite determinations are practically more accurate than mineralogic. If the zircon concentration in a stratigraphic section varies regularly, it is possible to ascertain the stratigraphic position of beds by measuring radioactive specimens with "Tsirkon".

[Abstracter's note: Complete translation]

Card 3/3

MOMDZHI, G. S.; KHOLINA, V. I.; ABULEVICH, V. K.

Test results and method of using the "TSirkon" radiometer. Razved. i okh. nedr 28 no.5:17-23 My '62. (MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

(Radioactive prospecting--Equipment and supplies)
(Zircon)

KALYUZHNAYA, S.N.; KHOLINA, V.I.

Titanium potential of loose Mesozoic and Cenozoic sediments in the Amur-Zeya Depression. Min.syr'e no.5:56-69 '62. (MIRA 16:4)

(Zeya-Bureya Plain--Titanium ores)

LEBEDEVA, L.V., kand. med. nauk; ROGOVAYA, V.F.; KHOLINA, V.M.; VLASOVA, N.A.; TSIV'YAN, L.S.

Significance of chemoprophylaxis and its methodology in the treatment of children with the first signs of positive tuberculin test. Prob. tub. no.1:3-8 '65. (MIRA 18:12)

1. Dispansernoye otdeleniye (zav.- kand. med. nauk Ye.A. Ginzburg) Moskovskogo instituta tuberkuleza (dir.- kand. med. nauk T.P. Mochalova, zamestitel' direktora po nauchnoy chasti - prof. D.D. Aseyev) Ministerstva zdravookhraneniya RSFSR i 16-y protivotuberkuleznyy dispanser Moskvy (glavnyy vrach P.A. Zal'munin).

S/120/63/000/001/061/072
E032/E314

AUTHOR: Kholinov, Yu.M.

TITLE: A liquid level-indicator for non-transparent cryostats

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1963, 192 - 193

TEXT: The sensing element is a capacitor which forms part of the tuned circuit of an oscillator (Fig. 1). When the capacitor is immersed in a liquid its capacitance changes and this gives rise to a change in the frequency of the oscillator. The change in the frequency is determined by the frequency-discriminator incorporating detuned parallel circuits with asymmetric outputs into a balanced DC amplifier. The readings of the milliammeter across the anodes of the latter are proportional to the change in the frequency and therefore the change in the liquid level. The zero of the instrument can be checked by the capacitors $C_э$ and $C_п$. The frequency discriminator includes low-Q circuits ($Q \sim 40$). Their resonant frequencies differ by

Card 1/2

A liquid level-indicator ....

S/120/63/000/001/061/072
E032/E314

20 kc/s. The possible frequency variation is by up to 6 kc/s. The device has been used to measure the position of the free surface liquid helium. The probe was in the form of a coaxial capacitor (20 cm long, 80 pF capacitance). The position of the surface could be determined to within ± 4 mm. There are 2 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AS USSR)

SUBMITTED: April 27, 1962

Card 2/2

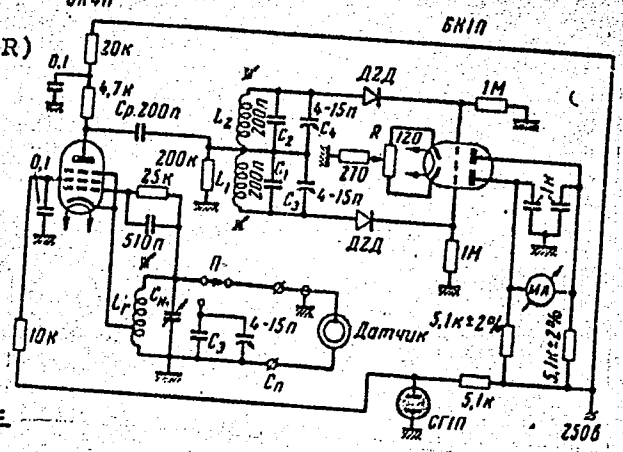


Fig. 1:

S/058/61/000/010/013/100
A001/A101

AUTHORS: Bartke, Ya., Chok, P., Gerulya, Ya., Kholinskiy, R., Miyezovich, M., Sanevskaya, T.

TITLE: Angular distribution of secondary particles in interactions of nucleons with heavy nuclei of the photoemulsion

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 96, abstract 10B495 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 1", Moscow, AN SSSR, 1960, 106 - 110)

TEXT: The authors investigate angular distributions of secondary particles produced in collisions of nucleons with heavy nuclei of photoemulsion. The results obtained are compared with predictions of the hydrodynamical theory (tube model) and the two-center model.

[Abstracter's note: Complete translation]

Card 1/1

SHALAYEV, M.I., kand.med.nauk (Perm', poselok P.D.K., ul. Pesochnaya, d.12); KHOLKIN, A.A.; TOMILIN, A.K.; ONOSOV, A.G.

Closed lesions of the liver according to six-year data of some hospitals in the Kizel coal basin. Klin.khir. no.9:72 S '62. (MIRA 16:5)

(KIZEL BASIN—LIVER—WOUNDS AND INJURIES)

SOV/137-57-11-22690

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 293 (USSR)

AUTHOR: Kholkin, A. I.

TITLE: New Method for the Magnetic Control of the Quality of the Heat Treatment of Steel Articles (Novaya metodika magnitnogo kontrolya kachestva termicheskoy obrabotki stal'nykh izdeliy)

PERIODICAL: Tekhnol. avtomobilestroyeniya, 1957, Nr 2, pp 45-49

ABSTRACT: The sensitivity of the induction method for the inspection of hardness by the differential system, can be considerably increased if the article tested is first magnetized in a constant or variable magnetic field. This method is considered to be reliable for the inspection of the hardness of machine parts made of 40Kh and 40KhN-grade steels within the range of 330 - 430 H_V units. The induction method is not suitable for the separation of the same machine parts with an $H_V < 260$ - 280 from machine parts with an $H_V > 500$. For this purpose an instrument was designed which utilizes the relationship between the coercive force and the H_V of the specimens after quenching (intermediate inspection) and after annealing. The schematic principle and a description of the working of the

Card 1/2

New Method for the Magnetic Control of the Quality (cont.)

instrument for the inspection of a valve stem after quenching and tempering are adduced. The inspection method has been checked under shop conditions.

B. S.

KHOL'KIN, A.I.; GINDIN, L.M.

Extraction equilibria in the system water - n-decane - n-caprylic acid. Izv. SO AN SSSR no.7 Ser. khim. nauk no.2:33-41 '65.
(MIRA 18:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk. Submitted February 26, 1964.

KHOL'KIN, A.I.; IVANOV, I.N.; GINDLL, I.M.

Extraction equilibria in the system water - [illegible] acid - sodium caprylate. Izv. SO AN SSSR no.7 Ser. Khim. nauk no.[illegible] SO '65. (MIRA 18:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk. Submitted December 26, 1964.

VOLKOV, A.; GAVRILOV, Yu.; KHOLKIN, V. (g.Revda); VOLKOV, N. (g.Rezh, Sverdlovskoy oblasti); GRIGOR'YEV, V., gornyy inzh.; TISHCHENKO, N., gornyy inzh.

Our readers' letters. Izobr. i rats. no.10:42-44 O '58. (MIRA 11:11)

1. Nachal'nik byuro sodeystviya izobretatel'stvu i ratsionalizatsii Zaporozhskogo transformatornogo zavoda (for Gavrilov). 2. Nachal'nik byuro sodeystviya izobretatel'stvu i ratsionalizatsii Srednеural'skogo medeplavil'nogo zavoda (for Kholkin).
(Efficiency, Industrial) (Inventions)

KHELKIN, V. F.

PHASE I BOOK EXPLOITATION SOV/3899

Kompleksnaya mekhanizatsiya i avtomatizatsiya proizvodstva; iz opyta zavodov Penzenskogo sovnarkhoza (Overall Industrial Mechanization and Automation; From Experience of Factories Under the Penza Council of the National Economy) [Penza] Penzenskoye knizhnoye izd-vo, 1959. 230 p. Errata slip inserted. 2,000 copies printed.

Ed.: V. Tsar'kov; Tech. Ed.: Ye. Voronkova.

PURPOSE: This collection of articles is intended for the general reader interested in the mechanization and automation of machine-tool production

COVERAGE: The efforts of industrial workers of the Penza district to fulfill ahead of time the objectives set forth in the Seven Year Plan are discussed in these 11 articles. The need for complete automation in the production of machine tools and instruments is strongly emphasized. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 3/3

VK/rem/gmp
8-11-60

(11)

KHOLKIN, Yu.I.

Furfurole in industrial organic chemistry; a survey. Gidrolis. i lesokhim. prom. 11 no.1:31-32 '58. (MIRA 11:2)

1.Sibirskiy lesotekhnicheskiy institut.
(Furaldehyde)

KHOL'KIN, Yu.I., nauchnyy rabotnik

Technical institution of higher learning in Siberia. Gidroliz. i lesokhim.prom. 12 no.1:30-31 '59. (MIRA 12:2)

1. Sibirskiy tekhnologicheskiy institut.
(Krasnoyarsk--Chemical engineering--Study and teaching)

RESNIKOV, V.M.; KHOL'KIN, Yu.I.; PLOTNIKOV, G.S.

Analysis of the products and by-products of the furfurole manufacture at hydrolysis alcohol plants. Trudy Sib.tekh. inst. no.23:33-37 '59. (MIRA 14:4)
(Furaldehyde) (Hydrolysis)(Wood--Chemistry)

KHOL'KIN, Yu.I.

Photoelectric colorimetric determination of the resinous matter content of furfurole. Trudy Sib.tekh.inst. no.23:38-44 '59.
(MIRA 14:4)

(Furaldehyde)

KHOL'KIN, Yu.I.; REZNIKOV, V.M.

Adsorption of furfurole from organic solvents by alumina.
Trudy Sib.tekh.inst. no.23:51-55 '59. (MIRA 14:4)
(Furaldehyde)

REZNIKOV, V.M.; KHOL'KIN, Yu.I.

Adsorption of turpentine from organic solvents by alumina.
Trudy Sib.tekh.inst. no.23:69-70 '59. (MIRA 14:4)
(Turpentine)
(Alumina)

KHOL'KIN, Yu.I.; PONUROV, G.D.

Chromatographic fraction of substances present in the products of furfurole manufacture. Trudy Sib.tekh.inst. no.23:71-73 '59.
(MIRA 14:4)

(Furaldehyde) (Chromatographic analysis)

REZNIKOV, V.M.; PLOTNIKOV, G.S.; KHOL'KIN, Yu.I.

Balance sheet of turpentine in furfurole production. Trudy Sib.tekh.inst. no.23:74-75 '59. (MIRA 14:4)
(Furaldehyde) (Turpentine)

KHOL'KIN, Yu.I.

Furfurole and its importance in the national economy. Trudy Sib. tek.inst. no.23:76-78 '59. (MIRA 14:4)
(Furaldehyde)

KHOL'KIN, Yu.I.

Optical properties of autoxidation products of furfurole. Trudy Sib.tekh.inst. no.24:46-52 '59. (MIRA 14:3)
(Furaldehyde—Optical properties)

KHOL'KIN, Yu.I.

Kinetics of coloration of furfurole in the course of its auto-oxidation. Zhur.prikl.khim. 33 no.4:914-919 Ap '60. (MIRA 13:9)

1. Sibirskiy tekhnologicheskiy institut.
(Furaldehyde)

KHOL'KIN, Yu.I.; VARAKSINA, T.N.

Problems of wood chemistry and chemical technology. Gidroliz. i lesokhim. prom. 14 no.5:30-32 '61. (MIRA 16:7)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR. (Wood)

REZNIKOV, V.M.; KHOL'KIN, Yu.I.; MOROZOVA, V.I.

Chromatographic analysis of furfurole. Gidroliz.i lesokhim.-prom. 15 no.6:19-22 '62. (MIRA 15:9)

1. Sibirskiy tekhnologicheskiy institut (for Reznikov, Khol'kin). 2. Krasnoyarskiy tsellyulozno-bumazhno-gidroliznyy kombinat (for Morozova).

(Chromatographic analysis) (Furaldehyde)

KHOL'KIN, Yu.I.; CHERNYAYEVA, G.N.

Methods for increasing the commercial stability of furfurole.
Gidroliz. i lesokhim. prom. 16 no.7:6-8 '63. (MIRA 16:11)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR.

STEPEN, R.A.; KHOL'KIN, Yu.I.; POCHAPSKAYA, N.P.

Polarographic determination of furfurole in the products of the hydrolysis industry. Gidroliz. i lesokhim. prom. 16 no.5:23-24 '63. (MIRA 17:2)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR.

KARPUSHEVA, A.I.; KHOL'KIN, Yu.I.

Adsorption purification of furfurole with natural sorbents.
Trudy DVFAN SSSR.Ser.khim. no.7:81-84 '65.
(HIRA 18:12)

CHERNYAYEVA, G.N.; KHOL'KIN, Yu.I.

Photometric determination of high-molecular weight products of autoxidation in furfuryl alcohol. Zhur. anal. khim. 20 no.3: 375-379 '65. (MIRA 18:5)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR, Krasnoyarsk.

KHOL'KIN, Yu.I.; KARPUSHEVA, A.I.

Adsorption of furfurole from aqueous solutions on activated coals. Zhur. prikl. khim. 38 no.1:226-230 Ja '65.
(MIRA 18:3)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR.

USSR/General And Specialized Zoology - Insects. Harmful Insects and Acarids. Chemical Means in the Control of Harmful Insects and Acarids. P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25411

Author : Popov, P.V., Khol'kin, Yu. S.
Inst : -
Title : Decomposition of Diethyl-4-nitrophenylthiophosphate in the Residues after Spraying and Dusting.

Orig Pub : V sb.: Organ. insectofungitsidy i gerbitsidy. M., Goskhimizdat, 1958, 64-68

Abstract : After spraying with thiophos emulsions (T), the concentration of the active substance in the preparation residue was decreased by 50% in darkness at 20° in 15 days, at 45° in 1-2 days; in sunlight at 40-45° in 20-30 min. At the same temperatures, but in sunlight, T dusts lost their toxicity two times faster. The loss of toxicity was due to the evaporation of the active substance and

Card 1/2

USSR/General and Specialized Zoology - Insects. Harmful Insects and Acarids. Chemical Means of Control of Harmful Insects and Acarids. P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25411

because of its decomposition, especially under the sun rays' action. One of the final products of the decomposition was probably, paranitrophenol. T hydrolysis with water vapors and water sufficiently liquid to form drops was of little importance in the loss of toxicity of the preparation residue. -- A.P. Acrianov

Card 2/2

ACC NR: AP6032530 SOURCE CODE: UR/0413/66/000/017/0131/0131

INVENTOR: Gusev, L. S.; Zimin, Yu. A.; Nistratov, A. F.; Pobedin, I. S.; Popov, A. K.; Rozanov, B. V.; Tokarskiy, A. P.; Kholin, Yu. T.; Tulyankin, F. V.; Shcheglov, V. F.; Yanovskiy, V. A.

ORG: none

TITLE: Drive of a high-speed counterblow hammer. Class 49, No. 185669 [announced by the All-Union Scientific Research Institute for the Planning and Design of Metallurgical Machinery (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktovskiy institut metallurgicheskogo mashinostroyeniya)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 131

TOPIC TAGS: metal forming machine tool, forging machinery, metal press

ABSTRACT: This Author Certificate introduces a drive of a high-speed counterblow hammer, which includes a high-pressure cylinder and a piston with a sliding sealing bushing. To improve the operational characteristics and efficiency of the hammer, the bushing, placed in a lower part of the cylinder, has a circular groove inside, into which oil is pumped under pressure equal to that of the gas in the cylinder, thus forming a layer which serves the dual purpose of sealing and lubrication. Orig. art. has: 1 figure.

SUB CODE: 11, 13/ SUBM DATE: 22May64/ UDC: 621.974.4-82

Card 1/1

NIKOLAYEV, A.V.; GRIBANOVA, I.N.; YAKOVLEVA, N.I.; DURASOV, V.B.; KHOL'KINA, I.D.; MIRONOVA, Z.N.; TSVETKOV, Ye.N.; KABACHNIK, M.I., akademik

Correlation between the extractive capacity of organophosphorus extraction agents and the σ constants of the substituents at the phosphorus atom. Dokl. AN SSSR 165 no.3:578-581 N '65.
(MIRA 18:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Nikolayev).

L 40113-66 EWT(m)/EWP(j)/T IJP(c) DS/GG/RM

ACC NR: AP6013910 (A) SOURCE CODE: UR/0076/66/040/004/0848/0849

AUTHOR: Nikolayev, A. V.; Gribanova, I. N.; Yakovleva, N. I.; Khol'kina, I. D. 53 B

ORG: Institute of Inorganic Chemistry, Siberian Branch, Academy of Sciences, SSSR (Akademiya nauk SSSR, Sibirskoye otdeleniye, Institut neorganicheskoy khimii)

TITLE: Radiation resistance of chelating phosphor-organic resins

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 4, 1966, 848-849

TOPIC TAGS: resin, organic phosphorus compound, chelate compound, uranyl nitrate, sorption, exchange reaction, radiation effect

ABSTRACT: Six sorbent resins based on diallyl esters of phosphinic acids were exposed to gamma radiation in distilled water (Co^{60} source, 600 rad/sec, $0.9 \cdot 10^8$ rad dose) to evaluate their radiation resistance. Irradiated materials were characterized by significantly lower capacity for sorption of uranyl nitrate and the appearance of a capacity for sodium exchange (See Table 1). The sorption mechanism is thought to have been altered in the process of irradiation. Orig. art. has: 3 tables.

Card 1/2 UDC: 541.515

L 40113-66

ACC NR: AP6013910

Table 1. Sorption properties of resins before and after irradiation, mg-equiv/g. δ=0, 1-0, 4 mm

Resin	Na^+ capacity		UO_2 sorption after 48 hr at 20C±2°	
	before irradiation	after irradiation	before irradiation	after irradiation
diallyl phosphate	4.7	3.13	4.0	2.6 --3.1
triallyl phosphate	0	4.0	1.95	0.15--0.50
diallylmethyl phosphonate	0	3.25	2.10	0.20--0.60
diallylbutyl phosphonate	0	3.40	3.30	0.30--0.70
diallylisobutyl phosphonate	0	3.30	2.95	0.30--0.70
diallylallyl phosphonate	0	3.32	2.44	0.86--1.0

SUB CODE: 07/ SUBM DATE: 21Jun65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 fv

L 26574-66 EWT(m)/EWP(j) RM

ACC NR: AP6016975 SOURCE CODE: UR/0020/65/165/003/0578/0581

AUTHOR: Nikolayev, A. V. (Corresponding member AN SSSR); Gribanova, I. N.; Yakovleva, N. I.; Durasov, V. B.; Khol'kina, I. D.; Mironova, Z. N.; Tsvetkov, Ye. N.; Kabachnik, M. I. (Academician)

ORG: Institute of Heteroorganic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR); Institute of Inorganic Chemistry, Siberian Department, AN SSSR (Institut neorganicheskoy khimii Siberskogo otdeleniya AN SSSR)

TITLE: Correlation of the extraction capacity of organophosphorus extraction reagents with the sigma constants of the substituents on the phosphorus atom

SOURCE: AN SSSR. Doklady, v. 165, no. 3, 1965, 578-581

TOPIC TAGS: organic phosphorus compound, uranyl nitrate, plutonium, alkylphosphine oxide, distribution coefficient, phosphinic acid

ABSTRACT: The article presents preliminary results on the correlation of the extraction capacity of neutral organophosphorus extraction reagents with their structure. The sigma constant, which Nikolayev et al. derived from the ionization constants of phosphorus acids in 1956, using the Hammett equation, was used to characterize the influence of substituents. The presence of a linear relationship between the effective extraction constants and sums of the sigma constants was demonstrated with a correlation coefficient of 0.994. The correlation of the sigma constants with the distribution coefficients was studied for the extraction of uranyl nitrate and plutonium (IV and VI) nitrate

Card 1/2 UDC: 541.49

L 26574-66

ACC NR: AP6016975

by organophosphorus compounds (approximately 30 extraction reagents) under various conditions. A linear relationship was found to exist between the logarithm of the distribution coefficients and sums of the sigma constants of the substituents on the phosphorus atom, obeyed by esters of phosphoric, mono- and dialkylphosphinic acids, trialkylphosphine oxides, and dialkyl phosphites. The linear relationship found was better satisfied by the distribution coefficients in extraction from neutral and moderately acidic solutions. Chiefly compounds containing isopropyl and isobutyl radicals in the ester groups or at the phosphorus atom satisfactorily obey the linear relationship. A linear relationship is also obeyed by the maximum values of the distribution coefficients for each extraction reagent. The distribution coefficients determined in extraction experiments are functions of several variables, including the constants of complex formation, salt formation (in acid media), hydration constants, and particular distribution coefficients of the substances participating in the equilibrium. From the fact that the logarithms of the distribution coefficients are linear functions of the sum of the sigma constants of the substituents, it follows that the particular distribution coefficients obey the Hammett equation in the cases considered. The correlations of the distribution coefficients of uranyl and plutonium nitrates for organophosphorus extraction reagents with the values of the sum of the sigma constants of the substituents on the phosphorus atom are tabulated for 24 extraction systems. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 07Jun65 / ORIG REF: 017 / OTH REF: 011

Card 2/2

MIRIMANYAN, V.A.; KHOLKINA, N.A.; OPARIN, A.I., akademik.

Physiological differences in leaves of the spring-summer shoots of citrus plants. Dokl.AN SSSR 90 no.5:925-928 Je '53. (MLRA 6:5)

1. Vsesoyuznaya selektsionnaya stantsiya vlazhno-subtropicheskikh kul'tur (for Mirimanyan, Kholkina). 2. Akademiya nauk SSSR (for Oparin).
(Citrus fruits)

KHOLL, J.;BISKUP, B.

"Pneumatic Transport Systems." p. 147,
(MECHANISACE, Vol. 2, No. 4, Apr. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

41045

S/058/62/000/008/011/134
A061/A101

21.5151

AUTHOR: Kholl, Jaroslav

TITLE: Device for protection against neutron or other penetrating radiation

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 19, abstract 8B136 P (Czech pat. no. 98898, March 15, 1961)

TEXT: Collapsible containers with renewable filler are suggested for protection against neutron or other radiation. As to its structure, the filler is a space lattice into which rods, disks, and other standard-shaped parts of a radiation-absorbing material are mounted. The remaining gaps are filled with water or other liquid medium used as moderator.

P. Sosenko

[Abstracter's note: Complete translation]

X

Card 1/1

S/081/62/000/021/028/069
B117/B101

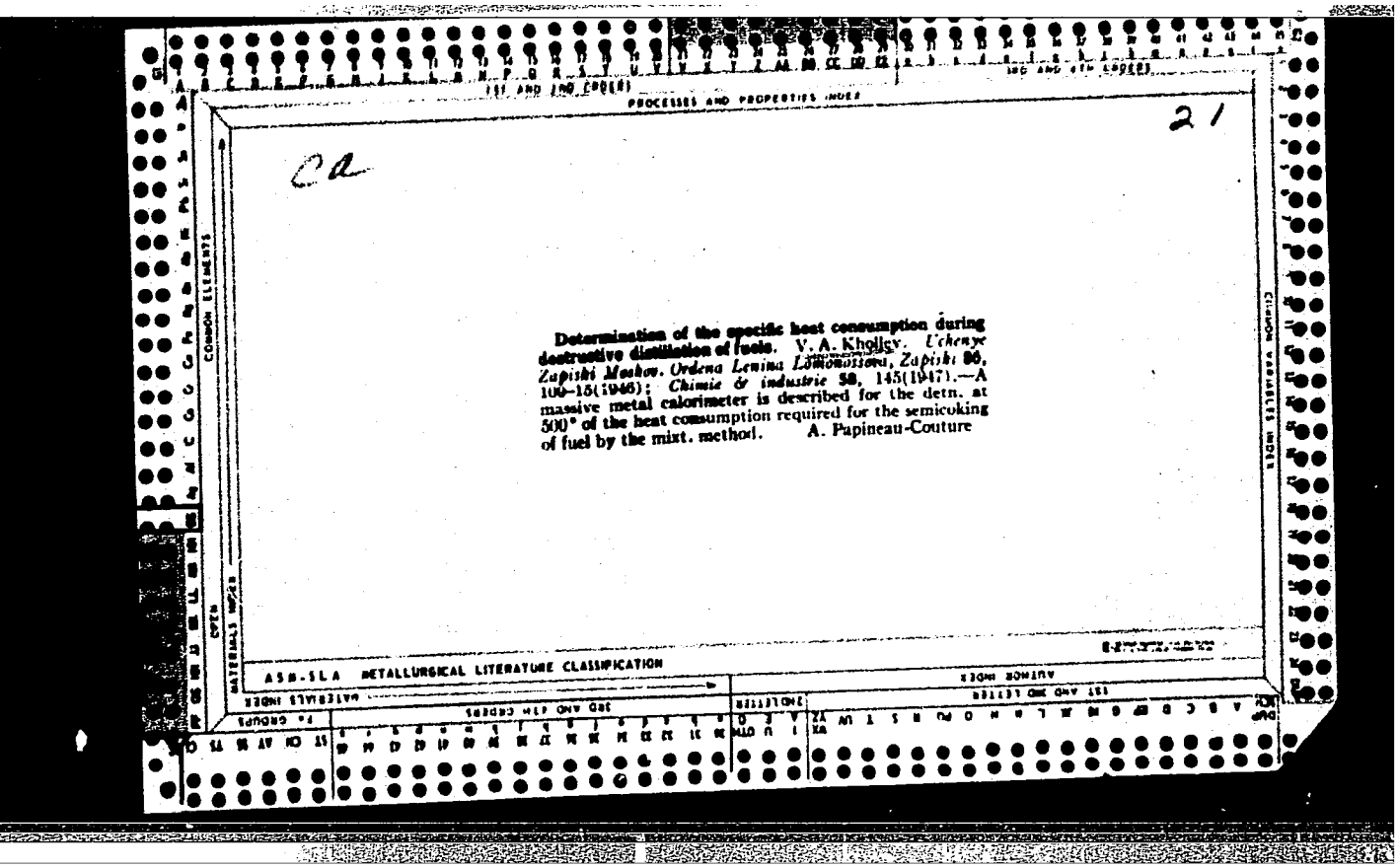
AUTHORS: Marek, Jan, Kholl, Jaroslav

TITLE: Method of crystallization with regulated crystal growth

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 272, abstract 21I96 (Chekhosl. pat. 99169. March 15, 1961)

TEXT: A method of crystallization has been patented, whereby the size of the crystals formed can be regulated. Pump (3) sucks in the mother liquor from crystallizer (1) through tube (2), whereby the mother liquor mingles with the fresh solution coming in through tube (4). From (3) the solution enters cooler (5), where it reaches the required degree of supersaturation. Through tube (6) the supersaturated solution is fed into the lower part of (1) where a suspension of growing crystals forms (7). According to the crystal size prescribed, the height and nature of the suspension rising in the circuit is determined by the rate of circulation of the supersaturated solution. The mixture of crystals and solution is discharged through connecting piece (8). The excess solution is decanted through tube (9). The method can be used not only to regulate the growth of the crystals formed but also to reduce the erosion and corrosion of

Card 1/2



PROCESSES AND PROPERTIES INDEX

21

Ca

Determination of the specific heat consumption during destructive distillation of fuels. V. A. Kholkev. *Uchenye Zapiski Moskov. Ordena Lenina Universiteta, Zapiski* 86, 100–15(1946); *Chimie & industrie* 58, 145(1947).—A massive metal calorimeter is described for the detn. at 500° of the heat consumption required for the semicoking of fuel by the mixt. method. A. Papineau-Couture

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

Curves of the true heat capacities of intermetallic compounds in the system magnesium-cadmium. K. G. Khoroshilov, V. A. Kheifets, and V. A. Trushkina (Moscow State Univ.). *Vestnik Moskov. Univ. 5, No. 6, Ser. Fiz.-Mat. i Estest. Nauk* No. 4, 43–54(1950).—High-accuracy detns. of the heat capacity c (cal./g.) were made by a method of continuous adiabatic heating with the aid of an elec. heater lodged in the interior of the cylindrical sample, similar to the method of Moser (*C.A.* 31, 601[9]) and of Sykes (*C.A.* 29, 2828[8]). (1) Two samples of MgCd, one of the compn. Mg 50.56, Cd 49.44 at. % (I), the other of the exact compn. Mg 50.00, Cd 50.00 at. % (II), had, at the lowest temps. of the expts. (~ 50°), c very close to the additive value, 0.090 cal./g.; with increasing temp., c increases anomalously along a λ-shaped curve, attaining $c = \infty$ at, resp., 250.2 (I) and 251.5° (II). Consequently, the transition at 251° involves a latent heat of transition of 5.3 cal./g. (av. of I and II) or $C = 0.362$ kcal./g. atom. Beyond the transition point, c falls abruptly, down to the additive $c = 0.106$ cal./g. at 260°. The integral heat of transition, by the area between the curves of the true c and the additive curve, is $c = 9.22$ cal./g., $C = 0.63$ kcal./g. atom. Hence, with the heat of formation ΔH of MgCd from the elements at room temp., 4.6 kcal./g. atom (Biltz and Holverst, *C.A.* 16, 4121), ΔH above the transition point is 4.6 − 0.63 = 3.97 kcal./g. atom. Annealing I for 5 hrs. at 200° did not change the shape of the curve or the position of the transition point. Quenching I from 2 hrs. at 300° to 0 or −17° resulted in a lowering of the values of c at low temps., with a min. at 63 and 64°, resp. By the criterion of the existence of a latent heat, the transition of MgCd at 251° is a transition of the 1st kind. On the other hand, the anomaly of c over a wide temp. range, and the shape of the curve, would classify the transition as one of the 2nd kind. Further evidence against the interpretation of the 251° point as order-disorder transition is the existence of a peak of the elec. cond. at the compn. MgCd (Grube and Schledt, *C.A.* 25, 1433) and the magnitude of $\Delta H = 3.97$, corresponding much more nearly to the formation of a chem. compd. than to a solid soln. If the latter is taken = 1.5 kcal./g. atom, and the anomalous rise of c below the 251° point is attributed to dissocn. of the compd. MgCd, the degree of that dissocn. at 251° is no higher than 10%. (2) An almost stoichiometric sample of $MgCd_3$, of the compn. Mg 24.85, Cd 75.15 at. %, showed an anomaly of c from the lowest temp. up; c is in excess of the additive value already at 35°, increases very steeply with rising temp., attains a max. ($c = 0.191$ cal./g.) at 77.7°, then falls to nearly the additive value within an interval of ~ 22°. The latent heat is zero, the integral heat of transition $C = 0.24$ kcal./g. atom. The broad temp. interval, 22°, of the decrease of c, is incompatible with a typical transition of the 2nd kind, and points rather to the diffusional type of 2nd-order transitions (Jaffray, *C.A.* 42, 4827a). A sample of $MgCd_3$, of the compn. Mg 27.58, Cd 72.41 at. %, i.e. close to but distinctly deviating from the stoichiometric compn., showed no transition of any kind, and its c remained close to the additive value over the whole temp. range 35–158°. N. Thon

KHOLLER, V.A.

✓True heat capacity of the phenol-water system in the region of critical temperature. K. G. Khomyakov, V. A. Kholler, and M. A. Nekrashevich (M. V. Lomonosov State Univ., Moscow). *Zhur. Fiz. Khim.* 25, 1469–74(1951); cf. *C.A.* 45, 7862e.—The true heat capacity (C) of a mixt. of phenol and water was measured calorimetrically at various temps. between 60 and 70°, including the consolute temp. (θ_c). The value of C increases rapidly as θ_c is approached from above or below, becoming infinite at θ_c. This type of temp. dependence is characteristic of second-order phase transitions; this indicates that C is anomalous at temps. above, as well as below, θ_c. The θ_c of systems contg. 27, 32, 34, and 44% phenol is 65.3, 65.4, 65.7, and 64.5° resp.
J. W. Loweberg, Jr.

KHOMYAKOV, K. G., KHOLLER, V. A., ZHVANKO, S. A.

Tin

Actual heat capacity of tin and cadmium near the melting point. Vest. Mosk. un 7, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October, 1952 1953. Unclassified.

KHOLLER, V.A., Sr. Sci. Colleague and KHOMYAKOV, K.G., Prof.

"On the Experimental Confirmation of Theory of the Generalized Critical Phenomena of V.K. SEMENCHENKO," a paper given at the All-University Scientific Conference "Lomonosov Lectures", Vest Mosk Un., No 8, 1953

Translation U-7895 1 Mar 56

Kholler, V.A.

Moscow State U.

Metallurgical Abstracts
July 1954
Properties of Alloys

*Specific Heat of an Aluminium-Zinc Alloy in a Critical Region of Decomposition of Solid Solutions. V. A. Kholler and K. G. Khomyakov (*Doklady Akad. Nauk S.S.S.R.*, 1953, 90, (2), 199–200).—[In Russian]. According to Semenchenko's theory (*Zhur. Tekhn. Fiziki*, 1947, 21, 1461; 1952, 27, 1337), so-called phase transitions of the second order are identical with critical phenomena, and the sp. heat (C_p) at the critical point must be a max. Kh. and Kh. have verified this by determining the variation of C_p with temp. for an Al-Zn alloy contg. 50 at.-% Zn. The alloy was prepared by melting 99·95% Al and sublimed 99·995% Zn in a graphite crucible under molten carnallite, and a machined cylindrical specimen 35 mm. × 25 mm. in dia. was placed in a hermetically sealed stainless steel vessel and the whole introduced into the calorimeter described by Kh., Kh., and Zhvanko (*Vestn. Moskov. Univ.*, 1952, (3), 41). C_p was measured both on heating (adiabatically) and on cooling (by Kholler's heat-exchange method, *ibid.*, 1948, (6), 95); heating and cooling rates of 0·2°–0·4° C./min. were used. Results are given as C_p/temp. curves; the heating and cooling curves are different in form. Confirmation was obtained of Lyashenko's observation (*Izvest. Akad. Nauk. S.S.S.R.*, 1951, [Khim.], (3), 242; *M.A.*, 20, 82) that the C_p/temp. curves obtained for alloys contg. 35–65 wt.-% Zn on heating at 2° C./min. exhibit first a peak corresponding to the monotectoid transformation at 279° C., and then a weak, sloping max. Kh. and Kh.'s heating curve had a similar weak max. at 317° C., but on the cooling curve there was a peaked max. at 303° C.; also, the monotectoid transformation was observed at 276° C. on heating and 15°–18° C. lower on cooling. From the area under the cooling curve, the heat of decomposition of the solid soln. is ~36 cal./g.-atom. The temp. at which the alloy transforms from single-phase to two-phase must be near 306°–310° C.—G. V. E. T.

SOV/137-58-9-19781

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 238 (USSR)

AUTHORS: Khomyakov, K.G., Kholler, V.A., Moiseyeva, Ye.I., Reznitskiy, L.A., Levitin, I.Ya.

TITLE: Investigation of Alloys of Magnesium With Cadmium. Communication Nr 2. True Heat Capacity of Alloys of Magnesium With Cadmium Close to Mg_3Cd in Composition and Chemical Association (Issledovaniye splavov magniya s kadmiyem. Soobshcheniye 2. Istinnaya teployemkost' splavov magniya s kadmiyem, primykayushchikh po sostavu i khimicheskomu soyedineniyu Mg_3Cd)

PERIODICAL: Vestn. Mosk. un-ta. Ser. matem., mekhan., astron. fiz., khimii, 1957, Nr 1, pp 123-130

ABSTRACT: The true heat capacity c of Mg-Cd alloys with 61.8-79.7 atom·% Mg was determined at 45-210°C by the method of continuous adiabatic heating. In alloys close to Mg_3Cd in chemical association, the presence of two chemical transformations (70-81° and 145-159°) is noted, corresponding to the process of the disordering of the alloy. The integral heat of the transformations constitutes 0.33 and 0.35 cal/g-atom, respectively.

Card 1/2

SOV/137-58-9-19781

Investigation of Alloys of Magnesium With Cadmium. (cont.)

With an increase in the heating rate the temperature of the first transformation increases. The alloy containing 61.8 atom·% Mg has the most sharply defined maximum of C_p. For Communication Nr 1, see Vestn. Mosk. un-ta. Ser. matem., mekhan., astron., fiz., khimii, 1950, Nr 6, pp 43-54.

B.L.

1. Cadmium-magnesium alloys--Specific heat 2. Cadmium-magnesium alloys--Thermodynamic properties

INSTITUTE : MOSKOVSKIY UNIVERSITET, KAFEDRA OBSHCHEY KHIMII.

Card 2/2

KHOLLER, V.A.

5(2),5(4)
AUTHORS: Khomyakov, K.S., Kholler, V.A., and Slavnova, S.K. SOV/55-58-4-29/31

TITLE: Investigation of Magnesium-Cadmium Alloys. Communication III. The Actual Thermal Capacity of the Magnesium-Cadmium Alloys, the Chemical Composition of Which is Little Different From $MgCd_3$ (Issledovaniye splavov magniya s kadmiyem. Soobshcheniye III. Istinnaya teployemkost' splavov magniya s kadmiyem, primykayushchikh po sostavu k khimicheskomu soyedineniyu $MgCd_3$)

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 4, pp 223-230 (USSR)

ABSTRACT: With the aid of a special calorimeter the authors obtained the curve $C_p = f(T)$ for four Mg-Cd-alloys (Cd-contents: 71.5; 73.0; 75.9; 77.2%) in the interval of temperatures from 27° to 125° C under a continuous adiabatic heating. In the neighborhood of the Curie-point all four curves show a characteristic maximum which for 71.5% and 73% Cd is ca. six times as large as the value calculated additively out from the components.
There are 5 references, 2 of which are Soviet, and 3 American.

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)
SUBMITTED: August 13, 1957
Card 1/1

5(4)

AUTHORS: Dyubakova, L.S., Kholler, V.A., Khomyakov, K.G. SOV/55-58-5-30/34

TITLE: Investigation of Magnesium - Cadmium Alloys. Note IV. Investigation of the Electric Resistance of the Magnesium-Cadmium Alloys in the Domain of the Chemical Compound $Mg\,Cd_3$ (Issledovaniye splavov magniya s kadmiyem. Soobshcheniye IV. Issledovaniye elektrosoprotivleniya splavov magniya s kadmiyem v oblasti khimicheskogo soyedineniya $Mg\,Cd_3$)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 5, pp 193 - 200 (USSR)

ABSTRACT: The electric resistance of the Mg - Cd alloys with 77.2 - 71.5 % contents of Cd was measured in the temperature interval 20 - 120° C. The value $\frac{\Delta R}{\Delta t}$ (variable factor of the temperature coefficient $\alpha = \frac{1}{R_o} \cdot \frac{\Delta R}{\Delta t}$; the constant factor $\frac{1}{R_o}$ was not measured) was calculated in the domain of structural

Card 1/2

Investigation of Magnesium - Cadmium Alloys.Note IV. SOV/55-56-5-30/34
Investigation of the Electric Resistance of the Magnesium - Cadmium Alloys in the Domain of the Chemical Compound $Mg\ Cd_3$

change in intervals of 2 - 3°. The curve $\frac{\Delta R}{\Delta t}$ - t has λ - form (R is the resistance, t the temperature). The equilibrium temperatures were determined according to the maximum of the curves $\frac{\Delta R}{\Delta t}$ - t. The results are compared with the measurings of G.G. Urazov, I.I. Kornilov, K.G. Khomyakov, V.A. Kholler, and V.A. Troshkina.

There are 13 references, 6 of which are Soviet, 3 German, 2 English, 1 American, and 1 Japanese.

ASSOCIATION: Kafedra obshchey khimii (Chair of General Chemistry)
SUBMITTED: February 25, 1958

Card 2/2

S/076/61/035/001/022/022
B004/B060

AUTHORS: Gerasimov, Ya. I., Kholler, V. A., Khomchenko, G. P.

TITLE: Konstantin Grigor'yevich Khomyakov (on his 70th birthday)

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 1, 1961, 228-229

TEXT: This is an article written on the occasion of the 70th birthday of K. G. Khomyakov, Professor, Doctor of Chemistry, on January 1, 1961. Khomyakov's scientific activity has always been connected with the Moskovskiy gosudarstvennyy universitet (Moscow State University). In 1915, when still a student, he collaborated with V. V. Razumovskiy on problems of defense. In the following year he worked as a chemist at the factory, in which the results of those studies were put into practice. After the revolution, the terrain of that factory was used for the construction of the first Scientific Research Institute of Applied Chemistry, at whose central laboratory Khomyakov worked for 12 years. In 1917, Khomyakov graduated from the khimicheskoye otdeleniye fiziko-matematicheskogo fakul'teta MGU (Chemical Department of the Division of Physics and Mathematics of Moscow State University), and, on a suggestion by

Card 1/3

Professor I. A. Kablukov remained at the University, where he worked at the thermokhimicheskaya laboratoriya im. V. F. Luginina (Thermochemical Laboratory imeni V. F. Luginin). In 1919, on Professor M. M. Popov's advice, he started with lectures of chemistry at the Rabochiy fakul'tet (Workers' Division) of the Moscow State University. As of 1930, he became concerned with industrial problems, e.g., when commissioned by the Institut udobreniy (Institute of Fertilizers) in collaboration with M. M. Popov, P. K. Shirokikh, N. N. Fedos'yev, and S. F. Yavorskaya on phosphates, and also on the catalytic synthesis of Synthol. He was awarded the D. I. Mendeleyev Prize for this activity. In 1934, Professor Khomyakov began with the study of the kinetics of dissociation of carbonates and the dehydration of crystal hydrates. This study was the basis on which he built his dissertation for a doctor's degree "Study of the transformation of solid phases under formation of a new solid phase and of gas". As from 1943, Khomyakov has been supervising the kafedra obshchey khimii (Department of General Chemistry) of the Chemical Division of Moscow State University. Under his guidance, studies were conducted (using calorimetric methods of continuous adiabatic electric heating) on transformations in metal and salt systems in the solid state (with V. A. Kholler, M. Ye.Levina,

V. A. Troshkina), on synthesis of zin phosphide (with N. V. Karvyalis), on the kinetics of the decomposition of molybdenum and tungsten peroxides (with G. V. Kosmodem'yanskaya), as well as (with I. A. Zaydenman) on the primary phase of the formation of Synthol from CO and H_2; furthermore, studies of the magnetic alloys Fe-Ni-Al and Fe-Co-Al (with V. A. Troshkina and Yu. D. Tret'yakov). Starting in 1956, Khomyakov has been conducting studies on the chemistry and the physics of ferrites. Mention is made of the study of multicomponent systems of salts of the schoenite type (with M. I. Ozerova and Yu. D. Tret'yakov), the specific heat of ferrites (with L. A. Reznitskiy), the valence states of cations in ferrites (with V. A. Kholler and A. I. Pavlova-Verevkina). Khomyakov is at present holding lectures on physicochemical analyses. The first volume of his book "Lektsii po obshchey khimii" (Lectures on General Chemistry) was published in 1957, and the second volume has now gone to the press. Khomyakov has been decorated with the Lenin Order. There is 1 figure.

GERASIMOV, Ya.I.; KHOLLER, V.A.; KHOMCHENKO, G.P.

Konstantin Grigor'evich Khomiakov; on the seventieth anniversary of his birth. Zhur. fiz. khim. 35 no.1:228-229 Ja '61. (MIRA 14:2)

(Khomiakov, Konstantin Grigor'evich, 1891-)

KHOLLER, V.A., KORETSHAYA, T.F., ZHOLKEVICH, V.N., (USSR)

"Measurements of the Energy Balance of Plant Tissues at Different Water Saturation Levels."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

ZHOLKEVICH, V.N.; KHOLLER, V.A.; KUSHNIRENKO, S.V.

Aftereffect of cooling on the effectiveness of respiration of cucumber leaves. Fiziol. rast. 9 no.3:353-358 '62. (MIRA 15:11)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow and Department of General Chemistry, Moscow State University.

(Plants--Respiration)
(Plants, Effect of temperature on)

L 6905-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(q)/EWP(b) Pr-4/Pu-4 AS(r)-2/ASD(a)-5/
ESD(gs/RAEM(t) JD/JG/GG
ACCESSION NR: AR4039929 S/0058/64/000/004/E083/E083

64

SOURCE: Ref. zh. Fiz., Abs. 4E649

AUTHORS: Kuz'mina, A. V.; Kholler, V. A.

TITLE: Measurement of stored energy in alkali halide crystals under the influence of gamma irradiation 19 27

CITED SOURCE: Mezhvuz. sb. tr. Zap.-Sib. sovet po koordinatsii i planir. nauchno-issled. rabot po tekhn. i yestestv. naukam, vy*p. 2, 1963, 54-61

TOPIC TAGS: alkali halide, gamma irradiation, crystal lattice energy

TRANSLATION: The stored energy of crystals of NaCl, KCl, KBr, and KI was measured by the method of simultaneous dissolution of irradiated and non-irradiated samples in a differential microcalorimeter.

Card 1/2

L 6905-65
ACCESSION NR: AR4039929

The crystals were first annealed at 550C for four hours; the irradiation was with Co^{60} at an intensity 250--700 roentgen/sec. It is established that the heat of dissolution of an irradiated crystal at a dose of 5×10^8 roentgen is smaller during the first day of measurements following the irradiation than that of a non-irradiated crystal. It is noted that the energy stored under the influence of the gamma radiation in alkali-halide crystals reaches a value close to the stored energy under the influence of heavy high-energy particles. In crystals with large lattice energy, higher values of the stored energy are observed. L. Mirkin.

SUB CODE: SS, GP ENCL: 00

Card 2/2

ZHOLKEVICH, V.N.; KHOLLER, V.A.; ROGACHEVA, A.Ya.

Correlation between respiration and heat loss in growing leaves. Dokl. AN SSSR 158 no.5:1213-1216 O '64. (MIRA 17:10)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR i Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.L.Kursanovym.

~~MOSKOV, VESTNIK~~

KHOLLER, V. A.

CA

2

Curves of the true heat capacities of intermetallic compounds in the system magnesium-cadmium. K. G. [illegible], V. A. Kholler, and V. A. Troshkina (Moscow [illegible]). *Vestnik Moskov. Univ.* 5, No. 6, *Ser. Fiz.* [illegible] No. [illegible] 43-54(1950).—High-accuracy [illegible] were made [illegible] the heat capacity [illegible] method of continuous adiabatic heating with the aid of an [illegible] lodged in the interior of the cylindrical sample [illegible] the method of Moser (*C.A.* 31, 601[a]) and of Sykes [illegible] two samples of MgCd, one of the [illegible] the other of the [illegible] Mg 50.00, Cd 50.00 at. % (II), had, at the lowest [illegible] of the expts. ($\sim 50°$), c very close to the additive [illegible] with increasing temp., c increases [illegible] shaped curve, attaining $C =$ [illegible] consequently, the transition [illegible] heat of transition of 5.3 [illegible] g. atom. Beyond the transition point, c falls abruptly, down to the additive [illegible] cal./g. at 330°. The integral heat of transition, by [illegible] between the curves of the true c and the additive [illegible] 0.22 cal./g., $C = 0.63$ kcal./g. atom. Hence, [illegible] formation ΔH of MgCd from the elements [illegible] kcal./g. atom, Biltz and Hohorst [illegible] ΔH above the transition point is 4.6 − 0.63 = [illegible] g. atom. Annealing I for 5 hrs. at 200° did not change the shape of the curve or the position of the transition point. Quenching I from 2 hrs. at 300° to 0 or −17° resulted in a lowering of the values of c at low temps., with a min. at 83 and 64°, resp. By the criterion of the existence of a latent heat, the transition of MgCd at 251° is a transition of the 1st kind. On the other hand, the anomaly of c over a wide temp. range and the shape of the curve, would [illegible] of the 2nd kind. Further [illegible] the interpretation of the 251° point as [illegible] of a peak of the [illegible] MgCd [illegible] and Schmidt, elec. cond. at [illegible] (*C.A.* 25, 4[illegible]) and the magnitude of $\Delta H = 3.97$, corresponding much more nearly to the formation of a chem. [illegible] If the latter is taken = 1.5 [illegible] below the 251° point is attributed to dissocn. of the compd. MgCd, the degree of that dissocn. at 251° is no higher than 10%. 2) An almost stoichiometric sample of MgCd, of the compn. Mg 24 [illegible] showed an anomaly of c from the [illegible] the additive value already [illegible] additive value [illegible] transition $C = 0.24$ kcal./g. atom. The integral heat of transition heat is zero, the broad temp. interval, 22°, of the decrease of c, is incompatible with a typical transition of the 2nd kind, and points rather to the [illegible] type of 2nd order transition [illegible] MgCd [illegible] the compn. Mg [illegible] the stoichiometric compn., showed no [illegible] transition of any kind, and its c remained close to the additive value over the whole temp. range 35–158°. N. Thon

MARTINSON, E. , LIND, Kh., KHOLLO, V.

Is urea an irreversible final product of nitrogen metabolism in the animal organism? [with summary in English]. Biokhimiia 23 no.6:835-839 N-D '58 (MIRA 11:12)

1. Kafedra biokhimii Tartuskogo gosudarstvennogo universiteta.
(UREA)
(NITROGEN METABOLISM)

KHOLLO, V. [Hollo, V.]

Effect of urea and methylurea on secretion in Heidenhain's gastric pouch. Fiziol. zhur. 49 no.7:849-851 Jl '63. (MIRA 17:11)

1. From the Department of Biochemistry, Tartu University, Tartu.

KHOLLO, V. L., VILLAKO, L. A., ZALESSKAYA, Y. M., (USSR)

"Biosynthesis of Hexosamines in the Gastric Mucosa in Connection with Ammonia Conversions in it."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

MARTINSON, E.E. [deceased]; KHOLLO, V.L.

Glutamine synthetase of the gastric mucosa and its functional role.
Biokhimiia 29 no.3:399-401 My-Je '64. (MIRA 18:4)

1. Kafedra biokhimii Tartuskogo gosudarstvennogo universiteta.

AUTHORS: Khollo, Ya.; Seytli, Y. 69-58-2-17/23

TITLE: The Fractionation of Amylose According to the Degrees of Polymerization (Fraktsionirovaniye amilozy po stepeni polimerizatsii)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 2, pp 229-232 (USSR)

ABSTRACT: The principal part of starch consists of amylopectine and amylose. For determining the characteristics of these substances their molecular weight must be known. This is obtained by decomposing the substances into fractions and determining the average molecular weight of the separate fractions. In this article, a new method for fractionating amylose is proposed. Amylose is dyed blue under the action of iodine. The amylose molecules form spirals in the coils of which the iodine molecules are located. The developing complexes amylose-iodine are in equilibrium with the free iodine in the solution. The amylose-iodine complex is an unstable colloid which is precipitated from the solution under the influence of electrolytes. This fact is used for fractionating the amylose. If the iodine solution is added to the amylose, iodine complexes are formed with molecules of a high degree of polymerization. Reactions with molecules of lower polymerization take place only after the others

Card 1/2

The Fractionation of Amylose According to the Degrees of Polymerization

are saturated. If an electrolyte is present in the solution, the formed complexes are immediately precipitated. The characteristics of the various fractions of potato amylose are given in the table. The fractionating of wheat and corn amylose was carried out by similar methods. There is 1 table and 15 non-Soviet references.

ASSOCIATION: Budapeshtskiy tekhnicheskiy universitet, Kafedra sel'skokhozyaystvennoy khimicheskoy tekhnologii, Vengriya (Budapest Technical University, Chair of Agricultural Chemical Technology, Hungary)

SUBMITTED: October 15, 1957

1. Amylose--Fractionation 2. Polymerization--Applications
3. Amylose--Characteristics 4. Amylopectine--Characteristics

KHOLLO, Ya. [Hollo, J.] (Budapesht); UZONI, D. [Uzonyi, G.] (Budapesht); LEND'YEL, T. [Lengyel, T.] (Budapesht)

Differential ebulliometric measurement of the shifts of azeotropic point in the system ethanol- water induced by $CaCl_2$. Zhur. fiz khim. 36 no.1:53-56 Ja '62. (MIRA 16:8)

1. Budapeshtskiy tekhnicheskiy universitet.
(Ethyl alcohol) (Azeotropy) (Calcium chloride)

KHOLLOSH, G.

Distr: 4E2c

Optical and electronographic investigation of gold-tin alloys precipitated by simultaneous evaporation in vacuum. R. Toma, I. Teodorescu, and G. Khollosh. *Rev. phys., Acad. rep. populaire Roumaine* 4, 317–26(1959)(in Russian).—The method of simultaneous evapn. allows one to obtain at once all concns. of the binary system. Intermetallic compds. can be detected in the 1st approx. by the optical method, esp. if they have a nonmetallic character. The optical method fails, however, if an alloy contains several intermetallic compds. In the Au–Sn system a good correspondence was found only for Au–Sn compds. When an alloy contains several intermetallic compds. the study of other binary alloys of the same type is necessary in order to correlate properties with structure. Electronographic study can then be undertaken.

A. Libacky

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MJC(JD)
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KHOLMACHEVA, N.T.

Results of the treatment of hypertension with certain drugs; preliminary communication. Sovet. med. 17 no.3:21-23 Mar 1953.
(CLML 24:2)

1. Of the Propedeutic Clinic for Internal Diseases (Director -- Prof. V. A. Krakov), Yaroslavl' Medical Institute.

Investigation of some semiconducting compounds of the type $B_2^{I}B^{IV}_2C_3^{VI}$. L. I. Berger, N. A. Bul'onkov (10 minutes).

Investigation of solid solutions InSb-InAs. . I. K. Shukina, T. I. Kholmakova, V. G. Vinogradova, O. V. Mlodzeyevskaya, Yu. V. Oboznenko, L. M. Skhol'nikova (10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

KHOLMAN, G. PA 52/49T1

USSR/Academy of Sciences May/Jun 49

"New Books" 1 p

"Radiotekh" Vol IV, No 3

Lists five books: P. V. Shmakov's "Color Television," M. V. Belyakov's "The Influende of Meteorological Conditions on the Progation of Ultrashort Waves," O. A. Remez's "Radio Testing," G. Khol'man's "Oneration and Amplification of Decimeter and Centimeter Waves," and N. P. Bororoditskiy and I. D. Fridberg's "High-Frequency Inorganic Dielectrics."

KHOLMANSKIKH, N.N.

Innovators explore potentials. Transp. stroi. 12 no.12:9 D '62. (MIRA 16:1)

1. Nachal'nik avtobazy Moselektrotyagstroya.
(Lyublino--Motortrucks--Maintenance and repair)

KHOLMANSKIKH, Yu. B.

USSR/ Laboratory Equipment. Apparatuses, Their Theory Construction and Application. I

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27366.

Author : L.N. Antipin, Yu.B. Kholmanskikh, S.F. Vazhenin.

Title : Application of Polarograph to Automatic Recording of Polarization Curves in Fused Salts.

Orig Pub: Zh. fiz. khimii, 1956, 30, No. 7, 1672 - 1675.

Abstract: The installation for automatic recording of polarization curves with a polarograph by two different methods is described. 1. By the direct compensation method with following deduction of the voltage drop (current method). In this case, the change of the length of the slide wire of the polarograph corresponds to the change of voltage and the current is recorded with a galvanometer. 2. Commutator method (voltage method). In this

Card 1/2

USSR/ Laboratory Equipment. Apparatuses, Their Theory, Construction and Application. I

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27366.

case, the strength of the current is determined by the working length of the slide wire and the galvanometer serves as a voltmeter. It was established at the recording of anode polarization curves for fused cryolite with alumina (Na_3AlF_6 + 3% of Al_2O_3) by the current method that this method requires a cumbersome treatment of received results. The commutator method is sufficiently accurate for melted salts and allows the curves without any preliminary treatment.

INST: URAL'SKIY POLITEKHNICHESKIY INSTITUT IMENI S.M. KIROVA, SVERDLOVSK.

Card 2/2

KHOLMANSKIKH, Yu.D.

[redacted]

fused electrolytes. The view is supported by the cathodic polarization curves of fused NaCl, PbCl$_2$, AgCl, and cryolite with Na, Pb or Ag or Al in the melt. [illegible] them.

W. M. Shemyakin

SOV/149-58-5-8/18

AUTHORS: Tyurin, N.G., Kholmanskikh, Yu.B. and Kakovskiy, I.A.

TITLE: An Automatic Laboratory Instrument for Studying the Kinetics of Hydro-metallurgical Processes at High Temperatures and Pressures (Laboratornyy avtomaticheskiy pribor dlya issledovaniya kinetiki gidrometallurgicheskikh protsessov pri vysokikh temperaturakh i davleniyakh)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 5, pp 69 - 80 + 1 plate (USSR)

ABSTRACT: The autoclave processes play an increasingly important part in the modern hydrometallurgical practice and the field of their application continues to grow. To determine the optimum operating conditions in any particular case, it is necessary to study the kinetics of the autoclave reactions which is not easy owing to the inaccessibility of the system that has to be maintained at high temperatures and under high pressures. The standard method of chemical analysis of periodically taken samples is not suitable for studying reversible reactions, characterised by fast reaction rates or for determining the quantities of the gaseous phases taking

Card1/8

part in the reactions. In addition, a reverse reaction may take place in the sample during cooling, or the basic reaction may proceed continuously after removal of the sample from the autoclave, in which case the results of the analysis will not be a true indication of the conditions existing in the autoclave at the moment of sampling. To overcome these difficulties the present authors developed a laboratory instrument which is, basically, a recording polarograph with solid platinum micro-electrodes and in which the autoclave constitutes the electrolysis cell. A photograph of the complete apparatus is shown in Figure 1, while a diagrammatical sketch of the autoclave and the circuit diagram of the polarising unit and the automatic recorder are reproduced in Figure 3. A detailed description of the apparatus and the method of calibration are also given.

The main shortcoming of all polarographs with solid electrodes is that if reproducible results are to be obtained, means have to be found to "clean" the electrode surfaces which easily undergo chemical and/or physical changes.

An Automatic Laboratory Instrument for Studying the Kinetics of Hydro-metallurgical Processes at High Temperatures and Pressures

This is best done by the application of alternating polarisation (Ref 15) and this method has been adopted by the present authors, with the modification that polarisation takes place with the potential changing continuously. To ensure reproducibility of the results, the variation of the electrode potential E must follow a pre-determined law, e.g. $E = E_1 - vt$ where E_1 - potential at the beginning of the cycle, v - rate of the variation of the potential, t - time. With the linear character of the E/t relationship a generator of a simple construction can be used. Under the actual conditions the graph of this relationship constitutes a cyclic curve (see Figure 2). Each cycle consists of two periods: preliminary and working period. During the preliminary period the reduction products formed during the preceding working cycle are removed from the electrode surface. This is attained by superimposing on the electrode so-called initial potential of the sign opposite to the potential of the working period. Polarisation takes place during the

An Automatic Laboratory Instrument for Studying the Kinetics of Hydro-metallurgical Processes at High Temperatures and Pressures

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working period with the electrode potential changing from + 0.5 to -3.0 V.

The polarising potential in the form of periodic signals is supplied by a generator. This potential is applied to the cell through a calibrated resistance connected in series. The drop of potential on this resistance which is proportional to the current passing through the cell is fed to the input side of a DC amplifier and the amplified signal actuates the recording mechanism operating on the continuous balancing principle.

In the apparatus described in the present paper, the autoclave itself (250 ml capacity, designed to operate at temperatures up to 300 °C and pressures up to 100 atm and provided with an impeller operating at up to 2 800 rev/min) served as the electrolysis cell. A platinum foil disc 25 mm diameter was used as the anode and a platinum wire 3 mm long, 0.3 mm diameter served as the cathode. This gave the electrode areas ratio of approximately 1/550, which ensured a sufficient degree of stability of the potential of the non-polarisable electrode. The

An Automatic Laboratory Instrument for Studying the Kinetics of Hydro-metallurgical Processes at High Temperatures and Pressures

preliminary experiments designed to check the proper functioning of the cell were carried out at room temperature at atmospheric pressure. Polarograms were obtained for various solutions and from these calibration curves were constructed which confirmed the linear relationship between the wave-height and the cation concentration in the solution. The polarograms for various solutions of $CdCl_2$ in 0.5 N KCl are shown in Figure 4 (the concentration of $CdCl_2$ varying from 0.4 to 3.6 g/l). The calibration curve for this system (graph 1) and also for the system $CuSO_4$/1.0 N NH_4OH (graph 2) are reproduced in Figure 5. In the next stage dissolution of galenite in NaOH solutions in the presence of oxygen was investigated. The polarising cell was calibrated with the aid of the standard plumbite solutions (solutions of PbO in 0.5 N NaOH) at 105, 110, 115, 120 and 125 °C and under total pressure of 7 atm (Figure 6). The calibration curves constructed on the basis of polarograms shown in Figure 6 are reproduced

in Figure 7. These data were used to study the kinetics of the reaction:

$$PbS + 2O_{2(gas)} + 3OH^- = SO_4^{2-} + Pb(OH)_3^-$$

at 115 °C and partial oxygen pressure equal to 5.4 atm. The polarograms of this reaction are shown in Figure 8 and the kinetic curve (concentration of the dissolved galenite versus time) is reproduced in Figure 9. The separate oxygen and lead maxima can be easily distinguished on the polarograms, while the kinetic curve shows that after an induction period (Ref 21) a constant rate of solution is attained. The rate of solution (tangent of the slope of the linear portion of the kinetic curve) was 1.14×10^{-7} g - mol/sec, the rate of the solution constant being 1.1×10^{-8} g-molcm^{-2} sec^{-1} atm$^{-1/2}$. This value is in good agreement with the results obtained by Andersen et al (Ref 21).

The results of the present investigation show that a

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AUTHORS: Kakovskiy, I.A., and Kholmanskikh, Yu.B., (Sverdlovsk)

TITLE: Study of the Kinetics of the Process of Cyanidation of Copper and Gold

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, No.5, pp. 207-218

TEXT: The process of dissolution of copper, silver and gold in cyanide solutions was investigated using the method of a rotating disc (Ref. 17). The concentration of cyanide in solution was determined at the beginning and end of the experiment. The quantity of metal dissolving was fould by analysing samples taken from the reaction vessel after different lengths of time. Copper was determined iodometrically after removing the cyanide by evaporation with sulphuric acid; gold by assay analysis after evaporation in a lead dish. Experimental details were given in earlier work of the authors (Ref. 1) of which this is a continuation. Results showed that the rate of dissolution was determined by the rate of diffusion of the cyanide at

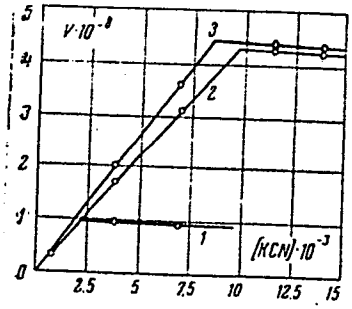
Card 1/5

S/180/60/000/005/027/033
E193/E183

Study of the Kinetics of the Process of Cyanidation of Copper and Gold

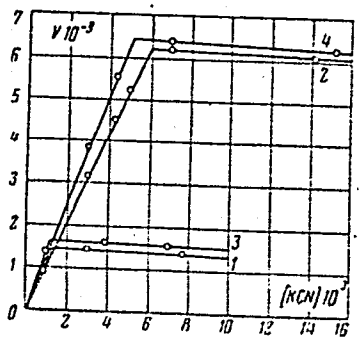
concentrations below a limiting value, and by the rate of diffusion of oxygen at concentrations above this value.

Fig. 1



Фиг. 1.

Fig. 6



Фиг. 6.

Card 2/5

S/180/60/000/005/027/033
E193/E183

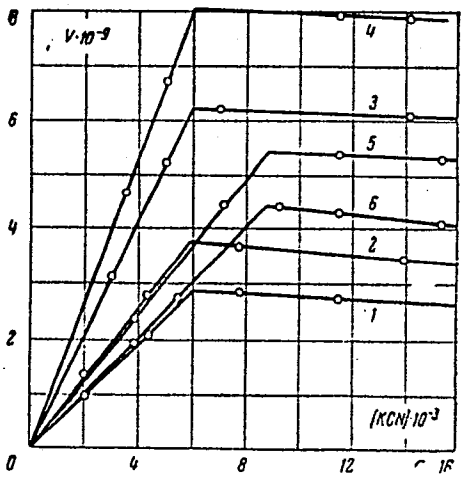
Study of the Kinetics of the Process of Cyanidation of Copper and Gold

Fig. 1 shows the rate of dissolution of copper (g mol/cm^2 sec) plotted against cyanide concentration (g mol/litre).
Fig. 6 shows the rate of dissolution of gold against cyanide concentration - curves 1 and 3 at an oxygen pressure of 0.21 atm., and curves 2 and 4 at 1 atm. The rate of dissolution also depended on temperature as shown by Fig. 6. Curves 1 and 2 are from experiments at 25 °C and curves 3 and 4 from experiments at 35 °C. When the process of dissolution was controlled by diffusion, the rate of dissolution of the noble metals could be decreased by the formation of simple cyanides of the metals on the surface.
Fig. 3 shows the rate of dissolution of gold plotted against cyanide concentration for different rates of revolution of the disc. Curves 1, 2, 3, 4, 5 and 6 correspond to 0, 0.5, 1.67, 2.5, 6.1 and 18.3 revolutions/second respectively. At rates higher than 2.5 revolutions/second the process changes from a diffusion to a kinetic one.
Card 3/5

S/180/60/000/005/027/033
E193/E183

Study of the Kinetics of the Process of Cyanidation of Copper and Gold

Fig. 3



Фиг. 3.

Card 4/5

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E193/E183

Study of the Kinetics of the Process of Cyanidation of Copper and Gold

There are 7 figures, 4 tables and 21 references: 10 Soviet and 11 non-Soviet.

SUBMITTED: February 11, 1960

Card 5/5

TYURIN, N.G.; KHOLMANSKIKH, Ya.B.

Conditions governing the formation of supergene deposits of gold and silver. Izv.vys.ucheb.zav.; geol.i razv 5 no.6:70-78 Je '62. (MIRA 15:7)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.
(Kazakhstan—Precious metals)

KNYAZEV, Ye.A.; KANOVSKIY, T.A.; KHOLMANSKIY, Yu.P.

Interaction of germanium dioxide with aqueous solutions of acids and bases. Zhur.neorg.khim. 10 no.12:2698-2705 D '65.
(MIRA 19:1)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut mednoy promyshlennosti i Ural'skiy politekhnicheskiy institut imeni Kirova.

BAUKIN, L.I., gvardii podpolkovnik med. sluzhby; ROZHKOV, And. T., polkovnik med. sluzhby; KHOLMANSKIY, N.S., polkovnik med. sluzhby.

Some aspects of the organization of medical services of a field army of the United States. Voen. med. zhur. no.4:91-96 Ap '57. (MIRA 12:7)
(MEDICINE, MILITARY AND NAVAL,
organiz. in US (Rus))

KHOLMATOV, A.

USSR/Cultivated Plants - Grains. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82318

Author : Kosimov, D., Kholmatov, A.
Inst : -
Title : On Mixed Plantings of Corn and Beans

Orig Pub : Khochagii kishloki Tochikiston, 1957, No 5, 33-37 (tadzh.), S. kh. Tadzhikistana, 1957, No 5, 35-38

Abstract : Results of an experiment carried out in 1956 on the experimental plot of Tadzhik Institute of Agriculture, on the cultivation of corn mixed with beans on irrigated soil. Plants of the pure and mixed sowings were almost the same with regard to the rates of growth. However, the corn plants of mixed sowings considerably surpassed the corn of pure sowings in height and diameter of the sten, the number of leaves on a single plant, their width and length, and also in the number of cobs. The setting of the first cob in plants of mixed sowings was also

Card 1/2

Card 2/2